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National Environmental/Energy Workforce Assessment. Potable Water Programs

National Field Research Center, Inc, Iowa City, IA

Prepared for

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Aug 79

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August 1979

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NATIONAL
ENVIRONMENTAL/ENERGY
WORKFORCE ASSESSMENT
PHASE III

POTABLE WATER PROGRAMS

1979

Conducted by:
NATIONAL FIELD RESEARCH CENTER, INC.

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16. ABSTRACT

This directory, one of 18 volumes in Phase III of the National Environmental/Energy Workforce Assessment, provides information on post-secondary environmental education programs in the United States. Structured around information requests mailed to post-secondary education institutions, the directory provides the name and address of each institution listed, a contact person at each institution, the academic program title, and the degree offered at the institution (2-year, 4-year, etc.).

Phase III includes twelve such directories of post-secondary programs: One each for air, noise, pesticides & toxicology, potable water, wastewater, radiation, solid waste, and energy; one for combined water/wastewater programs; and a composite volume on each of the three areas of environmental engineering/technology, environmental science/health, and environmental studies. In addition, Phase III includes the following six volumes: Environmental Employment in Public Service Jobs Programs -- An Analysis of CETA Title VI FY 78 Projects; Salaries & Attendant Problems of Public Sector Environmental Employment; The Role of CETA in Direct Training and Employment; Private Sector Training Activities; Problems in Environmental Education & Training; and the Workforce Planning Bibliography.

Phase I of the Assessment evaluated workforce needs for pollution control and abatement in the U.S. during 1976-81. Phase II gathered data on training and educational programs in the post-secondary environmental education field as of 1978.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS		b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
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Conducted by:

NATIONAL FIELD RESEARCH CENTER, INC.

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Grant No. T900591-03

1979

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INTRODUCTORY NOTE

The National Environmental/Energy Workforce Assessment, Phase III, was conducted by National Field Research Center, Inc., with main offices in Iowa City, Iowa. The following personnel have had primary responsibility for the development of the project reports.

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The volumes of post-secondary environmental and energy programs were developed under the auspices and guidance of the U.S. Environmental Protection Agency, by the National Field Research Center, Inc. as part of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, PHASE III. Sincere appreciation is extended to the many individuals and institutions who assisted in the identification and description of the programs, thus generously contributing to the success of this national project. Of particular importance are those individuals identified as contact persons in the program entries.

A special word of appreciation is extended to Mr. J. Donald Cook, Chief, Workforce Coordination Team, U.S. Environmental Protection Agency, Washington, D.C., and to the Manpower Officers and Workforce Coordinators from each of the U.S. Environmental Protection Agency Regional Offices.

PREFACE

This volume includes all identified post-secondary education and/or training programs which have been selected as pertinent to one media-specific area (i.e., air, wastewater, etc.). For ease of handling, the programs are presented in alphabetical order according to the name of the institution. The Appendix, however, presents a listing of the institutions by state, with reference to page numbers.

This portion of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, Phase III, was conducted for the U.S. Environmental Protection Agency, by the National Field Research Center, Inc. with offices located in Iowa City, Iowa; Atlanta, Georgia; Denver, Colorado; and Washington, D.C.

FOREWORD

Information for this portion of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, Phase III, was compiled through extensive review of catalogues from post-secondary education institutions listed in Post-Secondary Education, Education Directory, Colleges & Universities, 1976-77. All program entries were sent to the institutions for review and correction. In most cases, the program entries were returned after being reviewed. Those entries which were not returned have been indicated by an asterisk in front of the program title.

This twelve-volume report contains program entries from junior colleges, vocational/technical training institutes, community colleges, four-year colleges, and universities, as well as other training institutions. Programs are representative of all levels, from academic certification through doctoral degrees. The environmental pollution control areas of air, noise, pesticides, potable water, radiation, solid waste, wastewater and energy were surveyed. In addition, some programs which were not readily categorized

into media-specific areas (i.e., radiation, air, etc.) or which represented multiple media areas in curricula content, have been presented under the title of composite.

Readers are advised that material from the Acknowledgement through the Project Methodology is identical in all twelve program volumes. The reason for such duplication rests with the division of volumes into media specific areas, which increases probability that individuals will only read a given volume of special interest.

Readers are further advised that the purpose of these volumes is to point the direction for further information. Courses, programs and individuals are all subject to change over a given period of time. The inclusion of a specific program does not assure that the program is conducted every year nor does it assure that graduates meet specialized occupational requirements. Readers with specific questions should correspond directly with contact persons.

PROJECT BACKGROUND

The NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, conducted by the National Field Research Center under the direction of the U.S. Environmental Protection Agency, is an effort to meet the national concern for the preservation and conservation of our country's resources. The project was developed as a multi-phase direct inquiry into the availability and readiness of our environmental workforce.

In keeping with the objective of the assessment, this national effort was directed at environmental/energy workforce requirements, national environmental education preparedness, and the functional relationship between the two.

Phase I of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT focused upon the development of "workforce demand projections" through 1982 for all public environmental agencies. This on-site assessment, which was carried out in all 50 states, Puerto Rico and the Virgin Islands, culminated in a numerical profile of the growth patterns and workforce needs at national and state levels. Stratification of the overall definition of "environmental occupation" into seven

distinct vocational areas enhanced even further the applicability of the results. In addition to this public sector workforce assessment, Phase I included an overview analysis of private sector needs and a brief review of selected environmental educational programs.

Phase II of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT was structured around an intensive on-site inventory of representative environmental educational offerings on a national scale. The primary objective of this portion of the project was to collect and aggregate data on training and educational programs in both the post-secondary education field and in the private sector and to do so by environmental area. Specifically, the study was designed to provide an overview of environmentally related post-secondary education programs, their program structures, representative course offerings, employment history of the graduates, and the faculty structures. Additionally, information was collected on program requirements and program projections regarding faculty and students.

Phase III of the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT was completed in mid-1979. In an effort to draw together the relationship between Phase I and Phase II

of the project, several major areas were selected and monographs developed. In an effort to assist Federal and State planners, an environmental/energy manpower bibliography was developed and annotated. A final portion of the Phase III involved the identification of all environmental/energy post-secondary education programs as compared to the Phase I and Phase II which presented representative programs. This compendium of post-secondary environmental/energy programs was presented in media-specific volumes (i.e., Air, Potable Water, Solid Waste, etc.). While more extensive research may be advisable, it is anticipated that the NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT in its entirety represents the most comprehensive research effort to date regarding environmental/energy workforce requirements and the educational community's ability to meet these needs.

PROJECT METHODOLOGY

The NATIONAL ENVIRONMENTAL/ENERGY WORKFORCE ASSESSMENT, Phase III, includes several components, one of which is made up of the directories of post-secondary environmental/ energy programs. Utilizing the Post-Secondary Education, Education Directory, Colleges and Universities, 1976-77, requests were made of the 3,075 institutions and in addition any new institutions which could be identified. All environmental programs were categorized according to media areas, i.e., air, water, radiation, etc. The program entry information was sent to the contact person for corrections, deletions and general review. The contact persons were requested to return the reviewed information to project personnel. In the majority of cases, the information was returned by the institutions. Those program entries which were not returned have been indicated with an asterisk in front of the program title.

In total, 1,359 programs are presented in these volumes. All 50 states, the District of Columbia, Puerto Rico and the Virgin Islands are represented in the program entries. The introductions of each

volume present the details of selection criteria, geographic location, etc., of the programs presented in that specific environmental area.

The directories have been prepared by media specific area. The volumes which make up this portion of the project are:

* AIR
* NOISE
* PESTICIDES & TOXICOLOGY
* POTABLE WATER
* WASTEWATER
* WATER/WASTEWATER
* RADIATION
* SOLID WASTE
* ENERGY
* COMPOSITE: Environmental Engineering/Technology
* COMPOSITE: Environmental Science/Health
* COMPOSITE: Environmental Studies

INTRODUCTION

This report describes potable water education/ training programs which are currently being conducted in 19 states. In total, there are 41 program entries included in this volume. In addition, programs which also have a wastewater, as well as potable water, emphasis will be found in the volume entitled "Water/Wastewater". Those programs which emphasize potable water as well as other environmental areas are located in those volumes with composite programs. They are entitled:

* COMPOSITE: Environmental Engineering/ Technology
* COMPOSITE: Environmental Science/Health
* COMPOSITE: Environmental Studies

Criteria for selection was limited to the inclusion of at least three potable water courses as requirements for program completion. The programs presented herein include areas of emphasis such as: Hydrology, Aquatic Biology, Hydrogeology, Water Works Technology, Marine Environmental Sciences, and Coastal Oceanography. The types of degrees offered through these programs are described in Table I.

As indicated in the table below, the majority (85%) of the programs, presented in this volume, are being conducted at the four-year and graduate level.

TABLE I

POTABLE WATER PROGRAMS

Numbers and Types of Degree Offerings

Degree Level	No. of Programs	% of Total
Certificate	2	4.9%
Certificate; One-Year; Two-Year	1	2.4%
Certificate; Two-Year	1	2.4%
One-Year	0	0
Two-Year	2	4.9%
Four-Year	6	14.6%
Four-Year; Graduate	15	36.6%
Graduate	14	34.2%
TOTAL	41	100%

All programs included in this volume were submitted to the institutions for review and/or corrections. With the exception of 10%, all programs were reviewed and returned to project personnel.

Those programs comprising the 10% are denoted by the addition of an asterisk in front of the program title.

Geographic distribution of the programs is as follows: 20 programs, are currently being conducted in three southwestern states while three programs are on-going in two northwestern states; nine northeastern states are currently administering 13 programs while 12 programs are on-going in seven southeastern states. In addition to the education/training programs identified herein, it should be noted that non-institutional training is available, in most states, through the state water and/or wastewater operators association as well as other associations or groups.

The following program entries are presented in alphabetical order in accordance with the institution name. For a listing of programs by state location, the reader is referred to the Appendix.

PROGRAMS, ALPHABETIZED BY INSTITUTION

ALLEGHENY COLLEGE

Meadville, Pennsylvania 16335

Catalog Year
1976-77

contact person:
Dr. Samuel S. Harrison, Associate Professor of Geology, Director of Environmental Studies
(814) 724-3100

program title: **Aquatic Environments**
emphasis: **Environmental Science, Hydrology, Ecology, Resource Management, Land-use Planning, Aquatic Biology, Physical & Human Environment relating to fresh water.**
degree: **4 year**
comments: **Interdisciplinary major. Established in 1970. Prepares students to become hydrologists, aquatic biologists, water analysts.**

BALL STATE UNIVERSITY

Room 110
West Quadrangle
Muncie, Indiana 47306

Catalog Year
1976-77

contact person:
Dr. Clyde W. Hibbs, Chairperson
Department of Natural Resources
(317) 285-7161

program title: **Natural Resources Major**
emphasis: **Water Quality (1 of 6 options)**
department: **Department of Natural Resources**
degree: **4 year**

CALIFORNIA INSTITUTE OF TECHNOLOGY

1201 East California Blvd.
Pasadena, California 91125

Catalog Year
1977-78

contact person:
Director
Hydraulics and Water Resources
(213) 795-6811

program title: **Hydraulics and water resources**
department: **Engineering and Applied Science**
degree: **4 year**
Graduate

CALIFORNIA STATE UNIVERSITY AT FULLERTON

Fullerton, California 92634

Catalog Year
1976-78

contact person:
Dr. Prem K. Saint
Associate Professor
(714) 870-3882

program title: **Earth Science**
emphasis: **Hydrogeology**
department: **Earth Science Department**
degree: **4 year**

CALIFORNIA STATE UNIVERSITY AT LONG BEACH

1250 Bellflower Blvd.
Long Beach, California 90840

Catalog Year
1977-78

contact person:
Dr. Churduri V. Chelapati
Chairperson
(213) 498-4111

program title: **Civil Engineering**
emphasis: **Hydraulic, Environmental, Geomechanical, Transportation and Urban**
department: **Civil Engineering**
degree: **4 year**
Graduate
comments: **Also applicable to the media areas of air, wastewater, solid waste, and composite.**

CALIFORNIA STATE UNIVERSITY AT LOS ANGELES

Los Angeles
5151 State University Drive
Los Angeles, California 90032

Catalog Year
1977-78

contact person:
Dr. Young C. Kim
Chairperson
(213) 224-2520

program title: **Civil Engineering**
department: **Civil Engineering**
degree: **4 year**
Graduate
comments: **Civil Engineering option at undergraduate level. Program at graduate level.**

CHEMEKETA COMMUNITY COLLEGE

P.O. Box 1007
Salem, Oregon 97308

Catalog Year
1976-77

contact person:
Mr. Henry Cole, Director
Trade and Industry Technician
(503) 399-5061

program title: Well Drilling Technician
department: Trade and Industry
degree: 2 year

comments: Through classroom and field experience the student will study Geology and basic Hydrology as they pertain to ground water.

CLACKAMAS COMMUNITY COLLEGE

19600 South Molalla Avenue
Oregon City, Oregon 97045

Catalog Year
1976-77

contact person:
Dr. Daniel Lundy, Professor
Water Quality Technology
(503) 656-2631

program title: Water Works Technology
department: Water Quality Curriculums
degree: 2 year

FLORIDA INTERNATIONAL UNIVERSITY

Tamiami Trail
Miami, Florida 33199

Catalog Year
1978

contact person:
Dr. Daniel F. Jackson
Professor
(305) 552-2825

program title: **Water**
department: **Division of Environmental Technology and Urban Systems**
degree: **4 year**
Graduate

IMPERIAL VALLEY COLLEGE

P.O. Box 158
Imperial, California 92251

Catalog Year
1977-79

contact person:
Dr. Dale Gares, Dean
Admissions-Registrar
(714) 352-8320

program title: **Water Treatment Technology**
degree: **Certificate**
1 year
2 year

J. SARGEANT REYNOLDS COMMUNITY COLLEGE

P.O. Box 12084
Richmond, Virginia 23241

Catalog Year
1977-78

contact person:
Mr. H. M Townsend, Program Head
Ground Water Resources Assistant Professor
(804) 264-3242

program title: Ground Water Resources
emphasis: Ground water resources development
degree: Certificate
comments: Technician in any phase of the water well industry.

MIAMI-DADE COMMUNITY COLLEGE

South Campus
11011 S.W. 104th Street
Miami, Florida 33176

Catalog Year
1977-79

contact person:
Mr. John Pistorino, Chairperson
Department of Engineering
(305) 596-1255

program title: Water Treatment Plant Operations
department: Engineering
degree: Certificate

NORTHERN MICHIGAN UNIVERSITY

279 West Science
Marquette, Michigan 49855

Catalog Year
1977-78

contact person:
Dr. J. Kirwin Werner, Head
Biology Department
(906) 227-2310

program title: Water Science Curriculum
department: Interdisciplinary
degree: 4 year

PALOMAR COLLEGE

1140 West Mission Road
San Marcos, California 92069

Catalog Year
1977-78

contact person:
Dr. Robert Kuretich
Coordinator
(714) 744-1150

program title: Water Technology Education
department: Vocational Education
degree: Certificate
2 year

PURDUE UNIVERSITY

West Lafayette, Indiana 47907

Catalog Year
1976-78

contact person:
Dr. D. Wiersma, Director
Water Research Center
(317) 749-8111

program title: **Water Resources Research Center**
department: **Purdue University Natural Resources Research Institute**
degree: **Graduate**
comments: **Degrees are not granted through the Institute; they are issued through the department.**

SAN JOSE STATE UNIVERSITY

125 South Seventh Street
San Jose, California 95192

Catalog Year
1976-78

contact person:
Dr. Williams R. Blythe
Chairperson
(408) 277-2000

*program title: **Civil Engineering**
department: **Civil Engineering & Applied Mechanics**
degree: **4 year**
Graduate

STANFORD UNIVERSITY

Palo Alto, California 94305

Catalog Year
1977-78

contact person:
Dr. Robert L. Street
Chairperson
(415) 497-2300

program title: **Environmental and Water Studies**
emphasis: **Environmental Engineering; Hydrology; Hydromechanics; Nuclear Civil Engineering; Water Resources Engineering; Water Resources Planning.**
department: **Civil Engineering**
degree: **Graduate**

STANFORD UNIVERSITY

Palo Alto, California 94305

Catalog Year
1977-78

contact person:
Dr. Robert L. Street
Chairperson
(415) 497-2300

program title: **Civil Engineering**
department: **Civil Engineering**
degree: **4 year**

STATE UNIVERSITY OF NEW YORK
AT STONY BROOK

Marine Sciences Research Center
Stony Brook, New York 11794

Catalog Year
1976-78

contact person:
Dr. J. R. Schubel, Director
Marine Sciences Research Center
Chairperson, Marine Environmental Sciences and Coastal Oceanography
(516) 246-5945

program title: **Marine Environmental Sciences, Coastal Oceanography**
emphasis: **Coastal zone management, environmental protection, coastal oceanography**
Marine Science Research Center
degree: **Graduate**

UNIVERSITY OF ALABAMA

University, Alabama 35486

Catalog Year
1978-80

contact person:
Dr. W. Edward Lear, Dean
College of Engineering
(205) 348-6400

program title: **Engineering Hydrology**
emphasis: **Hydrology - Water Resources**
department: **Civil Engineering**
degree: **Graduate**

UNIVERSITY OF CALIFORNIA AT BERKELEY

Berkeley, California 94720

Catalog Year
1977-78

contact person:
Dr. Carl L. Monismith
Chairperson
(415) 642-6000

program title: **Water Resources Engineering**
department: **Civil Engineering**
degree: **Graduate**

UNIVERSITY OF CALIFORNIA AT DAVIS

Davis, California 95616

Catalog Year
1976-77

contact person:
Dr. Edward D. Schroeder, Chairperson
Civil Engineering Department
(916) 752-1011

*program title: **Water Resource Engineering**
department: **Civil Engineering**
degree: **4 year**

UNIVERSITY OF CALIFORNIA AT DAVIS

Davis, California 95616

Catalog Year
1976-77

contact person:
Dr. L. O. Myrup
Chairperson
(916) 752-0453

program title: **Soil Science, Water Science and Atmospheric Science.**
department: **Land, Air, and Water Resources**
degree: **Graduate**

UNIVERSITY OF FLORIDA

Gainesville, Florida 32611

Catalog Year
1977-78

contact person:
Dr. E. E. Pyatt, Chairperson
Department of Environmental Engineering Sciences
(904) 392-0841

program title: **Water Supply, Water Chemistry**
department: **Environmental Engineering Sciences**
degree: **Graduate**

UNIVERSITY OF FLORIDA

College of Engineering
Gainesville, Florida 32611

Catalog Year
1977-78

contact person:
Dr. G. L. Zachariah, Chairperson
Department of Agricultural Engineering
(904) 392-0941

program title: **Undesignated**
emphasis: **Management of Agricultural Water Systems**
department: **Agricultural Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF GEORGIA

Athens, Georgia 30602

Catalog Year
1977-79

contact person:
Dr. Allyn Marsh Herrick, Dean
School of Forest Resources
(404) 542-2686

program title: **Forest Water Resources**
department: **School of Forest Resources**
degree: **4 year**
Graduate

UNIVERSITY OF KENTUCKY

Lexington, Kentucky 40506 Catalog Year
1976-77

contact person:
Dr. John Neal Walker, Chairperson
Department of Agricultural Engineering
(606) 258-9000

program title: **Undesignated**
department: **Agricultural Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF KENTUCKY

Lexington, Kentucky 40506 Catalog Year
1976-77

contact person:
Dr. R. B. Grieves, Chairperson
Department of Chemical Engineering
(606) 257-1748

program title: **Environmental Engineering**
department: **Chemical Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF KENTUCKY

Lexington, Kentucky 40506

Catalog Year
1976-77

contact person:
Dr. J. A. Deacon, Chairperson
Department of Civil Engineering
(606) 258-4856

program title: **Undesignated**
department: **Civil Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF MICHIGAN

School of Public Health
Ann Arbor, Michigan 48104

Catalog Year
1977-78

contact person:
Dr. John Gannon
Water Quality Program
(313) 764-1817

program title: **Water Quality**
department: **Environmental & Industrial Health**
degree: **Graduate**

UNIVERSITY OF MINNESOTA

Institute of Technology
112 Mineral & Metallurgical Engineering Building
Minneapolis, Minnesota 55455

Catalog Year
1975-77

contact person:
Dr. Charles Fairhurst, Head
Civil & Mineral Engineering
(612) 373-3135

program title: **Water Resources Engineering**
department: **Civil & Mineral Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF NEBRASKA

Lincoln, Nebraska 08508

Catalog Year
1977-78

contact person:
Dr. Gary L. Lewis, Assistant Director
Nebraska Water Resources Center
(402) 472-2371

program title: **Water Resources Engineering**
department: **Civil Engineering**
degree: **Graduate**

UNIVERSITY OF NEBRASKA

Lincoln, Nebraska 08508

Catalog Year
1977-78

contact person:
Dr. Gary L. Lewis, Assistant Director
Nebraska Water Resources Center
(402) 472-3305

program title: **Water Resources Planning & Management**
department: **Interdepartmental**
degree: **Graduate**

UNIVERSITY OF NEW HAMPSHIRE

Durham, New Hampshire 03824

Catalog Year
1976-77

contact person:
Dr. David P. Olson
Director
(603) 862-1020

program title: **Graduate program in Potable Water**
department: **Institute of Natural & Environmental Resources**
degree: **Graduate**

UNIVERSITY OF SOUTH CAROLINA

Columbia, South Carolina 29208

Catalog Year
1977-78

contact person:
Dr. Frank Caruccio
Program Director
(803) 777-4148

program title: **Environmental Analysis**
emphasis: **Acid-Mine Drainage**
department: **Geology**
degree: **4 year**
Graduate

UNIVERSITY OF SOUTHERN CALIFORNIA

Los Angeles, California 90007

Catalog Year
1976-77

contact person:
Dr. Victor I. Weingarten
Professor & Chairperson
(213) 746-2311

*program title: **Civil Engineering**
department: **Civil Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF TENNESSEE

Knoxville, Tennessee 37916

Catalog Year
1977

contact person:
Dr. William F. Brander, Director
Water Resources Research Center
(615) 588-6347

program title: **Water Resources Development**
department: **Water Resources Research Center**
degree: **Graduate**

UNIVERSITY OF TEXAS AT AUSTIN

Austin, Texas 78712

Catalog Year
1977-79

contact person:
Dr. Hudson Matlock
Professor and Chairperson of the Department
(512) 471-1233

program title: **Water Resources Engineering**
department: **Civil Engineering**
degree: **4 year**
Graduate

UNIVERSITY OF WISCONSIN AT MADISON

Madison, Wisconsin 53706

Catalog Year
1978

contact person:
Dr. Henry C. Hart
Chairperson
(608) 262-0651

program title: **Water Resources Management**
department: **Water Resources Management Executive Committee**
degree: **Graduate**

UNIVERSITY OF WISCONSIN AT STEVENS POINT

Stevens Point, Wisconsin 54481

Catalog Year
1975-77

contact person:
Dr. Daniel O. Trainer, Dean
College of Natural Resources
(715) 346-4617

program title: **Water Resources**
emphasis: **Water Chemistry, Watershed Management Limnology**
department: **College of Natural Resources**
degree: **4 year**
Graduate

UNIVERSITY OF WYOMING

P.O. Box 3334 University Station
Laramie, Wyoming 82071

Catalog Year
1977-78

contact person:
Dr. Robert L. Champlin, Associate Professor
Civil Engineering
(307) 766-4121

program title: **Water Resource Engineering**
department: **Civil and Architectural Engineering**
degree: **4 year**
Graduate

comments: **Use, control and transportation of water in all its aspects such as irrigation, drainage, flood control, navigation, hydroelectric power generation and atmospheric science utilization.**

APPENDIX
PROGRAMS, LISTED BY STATE

STATE	INSTITUTION	PAGE
ALABAMA	University of Alabama	18
CALIFORNIA	California Institute of Technology	10
	California State University at Fullerton	10
	California State University at Long Beach	11
	California State University at Los Angeles	11
	Imperial Valley College	13
	Palomar College	15
	San Jose State University	15
	Stanford University	17
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	University of California at Berkeley	19
	University of California at Davis	19
	University of California at Davis	20
	University of Southern California	26
FLORIDA	Florida International University	13
	Miami-Dade Community College	14
	University of Florida	20
	University of Florida	21
GEORGIA	University of Georgia	21
INDIANA	Ball State University	9
	Purdue University	16

STATE	INSTITUTION	PAGE
KENTUCKY	University of Kentucky	22
	University of Kentucky	22
	University of Kentucky	23
MICHIGAN	Northern Michigan University	15
	University of Michigan	23
MNNESOTA	University of Minnesota	24
NEBRASKA	University of Nebraska	24
	University of Nebraska	25
NEW HAMPSHIRE	University of New Hampshire	25
NEW YORK	State University of New York at Stony Brook	28
OREGON	Chemeketa Community College	12
	Clackamas Community College	12
PENNSYLVANIA	Allegheny College	9
SOUTH CAROLINA	University of South Carolina	26
TENNESSEE	University of Tennessee	27
TEXAS	University of Texas at Austin	27
VIRGINIA	J. Sargeant Reynold Community College	14
WISCONSIN	University of Wisconsin at Madison	28
	University of Wisconsin at Stevens Point	28
WYOMING	University of Wyoming	29